TASK FORCE WEB

NMCI Integration Considerations

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Michael Donovan, EDS
NMCI/ISF Enterprise Technology

Agenda

- Client Seat Capabilities
- Designing for Performance
  - Content Caching
  - Content Distribution
  - Compression
  - High Availability Hosting
  - Other Considerations
- NMCI Application Certification
  - Eligibility Guidelines

Client Seat Capabilities

- NMCI seats are “locked down”
  - Users do NOT have access to install software, including ActiveX controls
  - Users have “user” access, not administrator privilege
- If you are expecting to use a component that must be installed on the seat (Flash, etc.), check the Gold Disk build list for current seat capabilities. (http://www.eds.com/nmci/briefing_room.htm)
- Additional capabilities can be ordered through CLIN 23. (http://www.eds.com/nmci/clin023.htm)
- Client side components should be Win2K compliant as defined in the Application Specification for Windows 2000 Applications for Secured Windows Environments. Other needs may be accommodated after review.

Designing for Performance

- Performance of web applications can be influenced by design choices and deployment solutions
- Analysis of network traffic on a running application is critical. Factors like packet size, page round trips, “chattiness”, and caching restrictions can greatly impact user acceptance.

Content Caching

- Each component of a web page is retrieved separately. (1 “GET” per item)
- Best practices
  - Don’t cache dynamic content
  - Set content expiration appropriately
  - Consider scheduled downloads
- SSL impact the ability to cache

Content Distribution

- Content can be distributed to servers closer to the user
- Static or large files can be pushed to edge content cache to improve performance.
- Use of “generic” URL mapped to localized servers can effect retrieval from closest source as well.

Compression

- Most web servers and browsers support content compression.
  - Reflected in http accept-encoding request header
  - GZIP is the most common, often just a server setting
- It may be possible to use a multi-part mime or SOAP with attachments document to send an entire page in one packet.

High Availability Hosting

- NMCI supports “mission critical” application hosting. This places content in multiple server farms with automated failover.
- Investigate the use of local and global load balancing features to ensure availability.

Other Considerations

- Use of network monitoring tools (netmon, etc) to assist in performance optimization.
  - How may round trips to the server per page?
  - How many packets (packet size optimization)
  - Think packets * latency + rendering time
- Look at page content for optimal performance
  - Look at graphics (number and size of files)
  - Look at breaking up dynamic responses (paging)
  - Look at table size and page complexity (rendering speed)

NMCI Eligibility Guidelines

- Some application types are automatically rejected for NMCI migration. Applications that meet rejection criteria are not eligible for certification testing
- Common failure criteria are available. Failed applications must be remediated and retested.
- See the Navy Enterprise Application Developers Guide, Appendix L, Justification Ids for NMCI Application Certification for a list of formal rejection or failure criteria
- Check http://www.eds.com/nmci/transition.htm for the latest information on certification processes and guidance
- Ensure compliance with the Navy Enclave Protection Policy (NEPP). Waivers are not generally granted.
- Host mobile code according to the NEPP guidelines. Host code in each enclave.